

REMARKS

In response to the Final Office Action dated May 25, 2010, and in response to the Request for Continued Examination file herewith, claims 1, 2, 12, 13, 16, 18, 22-25 and 28 have been amended. Claims 1-25, 27 and 28 are pending in the application.

In paragraph 4 on page 6 of the Office Action, claims 1-4, 7-16, 25, 27 and 28 were rejected under 35 U.S.C. § 102(e) as being anticipated by Ellis.

In paragraph 6 on page 17 of the Office Action, claims 5, 6 and 17-21 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Ellis in view of Moeller.

In paragraph 7 on page 20 of the Office Action, claims 22-24 were rejected under 35 U.S.C. § 103(b) as being unpatentable over Ellis in view of Moeller, and further in view of Youden.

Applicant respectfully traverses the rejection, but in the interest of expediting prosecution has amended the claims. .

Independent claim 1 sets forth presenting a program guide identifying audiovisual data and designating a set start time and a set stop time for the identified audiovisual data, receiving at a set-top box audiovisual data from a desired transmission channel beginning at the set start time, if said audiovisual data is not compressed according to a predetermined format, compressing said received audiovisual data according to said predetermined format, in response to receiving a request for recording compressed audiovisual data selected from the program guide prior to the set start time for the selected compressed audiovisual data identified in the program guide, storing dynamically, in a mass storage device and for a predefined period of time, the selected compressed audiovisual data received from said desired transmission channel to be included in a

title plan generated by a time shift scheduler, wherein said title plan includes information identifying the selected compressed audiovisual data stored dynamically, wherein the selected compressed audiovisual data has a variable duration extending beyond the set stop time, wherein storing the selected compressed audiovisual data dynamically includes allocating a first portion of memory in the mass storage device for recording a first portion of the selected compressed audiovisual data having the variable duration extending beyond the set stop time for subsequent access by users, utilizing said allocated first portion of memory to record the first portion of the selected compressed audiovisual data having a variable duration extending beyond the set stop time, allocating an additional portion of memory in the mass storage device to record a next portion of the selected compressed audiovisual data having the variable duration extending beyond the set stop time in response to utilizing said allocated first portion of memory, utilizing said allocated additional portion of memory to record the next portion of the selected compressed audiovisual data having a variable duration extending beyond the set stop time, determining when reception of the selected compressed audiovisual data having the variable duration extending beyond the set stop time has terminated, repeating said utilizing and said allocating said additional portion of memory until the selected compressed audiovisual data having the variable duration extending beyond the set stop time is determined to have terminated so that all of said selected compressed audiovisual data having a variable duration extending beyond the set stop time is stored and deallocating any allocated next portion of memory not used to record the next portion of the selected compressed audiovisual data having a variable duration extending beyond the set stop time after the selected compressed audiovisual data having the variable duration extending beyond the set stop time is determined to have terminated; and in response to

a user request, providing to said user said stored compressed audiovisual data beginning with a portion of said stored compressed audiovisual data having associated with it a first temporal parameter. Independent claims 2, 12 and 28 set forth similar elements.

In contrast, Ellis merely discloses a program guide system that records, at a remote server, programs and associated program guide data on storage in response to record requests generated by the program guide. According to Ellis, programs may be recorded based on start/stop times; duration, channels and program identifiers.

Ellis also discloses pausing a live program. According to Ellis, programs may be cached for playback by a user. 15 minutes of data is prefetched and cached in response to a playback request and this data is cached prior to broadcast to the user. Ellis also discloses providing users with an opportunity to cache real-time programs. This allows users to view portions of a program they would otherwise not be able to view when, for example, they must momentarily leave the room in which the program is being shown. A user may indicate a desire to record a on remote media server 24 by pressing a "PAUSE key on remote control 40. When the user returns, the remote media server 24 may playback the cached copy of the program while continuing to cache the remaining portion of the aired program until the program is over.

However, Ellis fails to disclose, teach or suggest presenting a program guide identifying audiovisual data and designating a set start time and a set stop time for the identified audiovisual data and in response to receiving a request for recording audiovisual data selected from the program guide prior to the set start time for the selected audiovisual data identified in the program guide, storing dynamically the selected audiovisual data having a

variable duration extending beyond the set stop time. Ellis does not disclose how to store audiovisual data having a variable duration extending beyond the set stop time using a request that is made before the start time associated with the audiovisual data.

Ellis also fails to disclose, teach or suggest the incremental allocating and utilizing of portions of memory to record audiovisual data having a variable duration extending beyond the set stop time. More specifically, Ellis fails to suggest allocating a first portion of memory for recording a first portion of the selected audiovisual data having the variable duration extending beyond the set stop time, utilizing the allocated first portion of memory, allocating an additional portion of memory in the mass storage device to record a next portion of the selected audiovisual data in response to utilizing the allocated first portion of memory, utilizing the allocated additional portion of memory to record the next portion of the selected audiovisual data, determining when reception of the audiovisual data having the variable duration extending beyond the set stop time has terminated, repeating the utilizing and the allocating the additional portion of memory until the audiovisual data having the variable duration extending beyond the set stop time is determined to have terminated so that all of said selected compressed audiovisual data having a variable duration extending beyond the set stop time is stored.

Instead, Ellis merely disclose the simple processes of recording shows using start/stop times, durations, or by caching programs using the pause command. The use of the start/stop times will result in the failure to record the end of a program that extends beyond its stop time, such as a sporting event. The use of durations may capture the entire event, but is wasteful of memory. The use of the pause button fails to record a show using a request sent before the start

time of the program and may also fail to record beyond the stop time, especially if there is a recording conflict.

Ellis also fails to disclose, teach or suggest deallocating any allocated next portion of memory not used to record the next portion of the selected compressed audiovisual data having a variable duration extending beyond the set stop time after the selected compressed audiovisual data having the variable duration extending beyond the set stop time is determined to have terminated. Ellis does not suggest deallocating memory that was originally allocated to record a program.

Thus, Ellis fails to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Moeller fails to overcome the deficiencies of Ellis. Moeller is merely cited as disclosing storing a temporally sub-sampled version of the desired broadcast content to generate a fast-forward track and generating real-time encoded play tracks, fast forward tracks, rewind tracks, and entry point data (EPD) files associated with each track, wherein said fast-forward and rewind tracks forming said temporally adjusted content.

However, Moeller also does not disclose, teach or suggest storing compressed audiovisual data dynamically as recited in the subsequent elements of the claims “in response to receiving a record request prior to a broadcast time of the audiovisual data.”

Moeller also does not disclose allocating a portion of memory for recording a portion of the content having the variable duration, utilizing a predetermined amount of the allocated portion of memory, allocating an additional portion of memory to record a next portion of the content having the variable duration and determining when reception of the at least one of said

plurality of content having the variable duration has terminated. Rather, Moeller merely discloses generating a fast-forward track, rewind tracks, and entry point data (EPD) files associated with each track.

Still further, Moeller fails to suggest repeating said utilizing and said allocating said additional portion of memory until at least one of said plurality of content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored. Moeller also fails to suggest deallocating any allocated portion of memory not used to record a variable length program.

Thus, Ellis and Moeller, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Youden fails to overcome the deficiencies of Ellis and Moeller. Youden is merely cited as disclosing storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents. However, Youden also does not disclose, teach or suggest storing compressed audiovisual data dynamically as recited in the subsequent elements of the claims “in response to receiving a record request prior to a broadcast time of the audiovisual data.”

Moreover, Youden does not disclose allocating a portion of memory for recording a portion of the content having the variable duration, utilizing a predetermined amount of the allocated portion of memory, allocating an additional portion of memory to record a next portion of the content having the variable duration and determining when reception of the at least one of said plurality of content having the variable duration has terminated. Rather, Youden merely discloses storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents. Youden does not incrementally allocate memory for

dynamically storing a program in response to receiving a record request prior to a broadcast time of the audiovisual data. Youden also does not determine whether a program has terminated.

Still further, Youden fails to suggest repeating said utilizing and said allocating said additional portion of memory until at least one of said plurality of content having the variable duration is determined to have terminated so that all of said at least one of said plurality of content having a variable duration is stored. Youden also fails to suggest deallocating any allocated portion of memory not used to record a variable length program. Instead, Youden only describes storing said fast-forward tracks in extents in front to back order and storing said rewind tracks in extents.

Thus, Ellis, Moeller and Youden, alone or in combination, fail to disclose, teach or suggest the invention as defined in independent claims 1, 2, 12 and 28.

Dependent claims 3-11, 13-25 and 27 are also patentable over the references, because they incorporate all of the limitations of the corresponding independent claims 2 and 12, respectively. Further dependent claims 3-11, 13-25 and 27 recite additional novel elements and limitations. Applicants reserve the right to argue independently the patentability of these additional novel aspects. Therefore, Applicants respectfully submit that dependent claims 3-11, 13-25 and 27 are patentable over the cited references.


On the basis of the above amendments and remarks, it is respectfully submitted that the claims are in immediate condition for allowance. Accordingly, reconsideration of this application and its allowance are requested.

If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Attorney for Applicant, David W. Lynch, at 865-380-5976. If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 13-2725 for any additional fee required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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